In the United States Patent and Trademark Office

Appn. Number: _____

Appn. Filed: _____

Applicant(s): Welch

Appn. Title: Semiconductor Device / In Compensated Semiconductor

Examiner/GAU: _____ /324

Mailed: With Application

At: _____

Information Disclosure Statement

Commissioner of Patents and Trademarks
Washington, District of Columbia 20231

Sir:

Attached is a completed Form PTO-1449 and copies of the pertinent parts of the references cited thereon. Following are comments on these references pursuant to Rule 98:

PATENTS

Patent No. 5,663,584 to Welch describe semiconductor devices which operate on the basis that materials exist which produce a rectifying junction with semiconductor channel regions when they are doped either N or P-type, whether said doping is achieved via metallurgical or field induced means.

Patent, No. 5,760,449 to Welch describes Source Coupled Regeneratively Switching CMOS formed from a seriesed combination of N and P-Channel MOSFTES which each demonstrate the special operating characteristics of conducting significant current flow only when the Drain and Gate of a 449 Patent MOSFET are of opposite polarity, and the Gate polarity is appropriate to invert a channel region.

Patent No. 6,091,128 to Welch describes prevention of parsitic currents in semiconductor substrates.

Patent No. 6,268,636 to Welch describes a single device equivalent to CMOS.

Patents to:

Lepselter, No. 4,300,152;
Koeneke et al., No. 4,485,550;
Welch, No. 4,696,093;
Mihara et al., No. 5,049,953;
Homna et al. No. 5,177,568;
Nowak, No. 5,250,834; and

Shirato, Japanese Patent 404056360 A

are also disclosed as they describe Schottky barrier systems.

ARTICLES

A relevant article titled "SB-IGFET: An Insulated Gate Field Effect Transistor using Schottky Barrier Contacts for Source and Drain", by Lepselter & Sze, Proc. IEEE, 56, Jan. 1968, pp. 1400-1402, is also identified in said 584 Patent.

Further, a paper by Lebedov & Sultanov, titled "Some Properties of Chromim-Doped Silicon", Soviet Physics, Vol. 4, No. 11, May 1971 is identified as it discusses formation of a rectifying junction by diffusion of chromium into P-type Silicon.

A paper by Hogeboom & Cobbold, titled "Etched Schottky Barrier MOSFETS Using A Single Mask, Electronics Letters, Vol. 7, No. 5/6, (Mar. 1971) is also included as it describes formation of Schottky barrier MOSFETS by deposition of Aluminum onto semiconductor.

Articles which are incorported by reference hereinto, and which describe fabrication of non-scale conventional Schottky-barrier MOSFETS are:

"Sub-40 nm PtSi Schottky Source/Drain Metal-Oxide-Semiconductor Field-Effect Transistors", Wang, Snyder & Tucker, Appl. Phys. Lett., Vol. 74, No. 8, (22 Feb. 1999); and

"Experimental Investigation of a PtSi Source and Drain Filed Emission Transistor", Synder, Helms & Nishi, Appl. Phys. Lett. 67(10) (4 Sept 1995).

"The Metal-Semiconductor Contact: An Old Device With a New Future", Yu, IEEE Spectrum (March 1970).

Not accompanying is a book titled "Microelectronic Circuits" by Sedra and Smith, Saunders College Publishing, 1991.

Likewise mentioned, but not included is a book titled "Physics and Technology of Semiconductor Devices", by Grove, John Wiley & Sons, 1967; and

a book titled "Electronic Materials Science: For Integrated Circuits in Si and GaAs", Mayer & Lau, MacMillan, 1990.

SINCERELY,

JAMES D. WELCH
REG. NO. 31,216

PLEASE USE IN PLACE OF PTO FORM 1449 FOR SCIENTIFIC ARTICLES

"SB-IGFET: An Insulated Gate Field Effect Transistor using Schottky Barrier Contacts for Source and Drain", by Lepselter & Sze, Proc. IEEE, 56, Jan. 1968, pp. 1400-1402.

"Some Properties of Chromim-Doped Silicon", Soviet Physics, Lebedov & Sultanov,Vol. 4, No. 11, May 1971 is identified as it discusses formation of a rectifying junction by diffusion of chromium into P-type Silicon.

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Form PTO-1449 (REV. 7-80) — U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

LIST OF PRIOR ART CITED BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.	SERIAL NO.
APPLICANT: Welch	
FILING DATE	GROUP

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,663,584	9/1997	Welch	257	288	
	AB	5,760,449	6/1998	Welch	257	369	
	AC	6,091,128	7/2000	Welch	257	476	
	AD	6,268,636	7/2001	Welch	257	476	
	AE	4,300,152	11/1981	LepselTer	357	42	
	AF	4,485,550	12/1984	Koeneke et al.	29	571	
	AG	4,696,093	9/1987	Welch	437	176	
	AH	5,049,953	9/1991	Mihara et al.	357	15	
	AI	5,177,568	1/1993	Honma et al.	257	295	
	AJ	5,250,834	10/1993	Nowak	257	350	
	AK						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO
	AL	4-56366	2/1992	Shirate				
	AM							

OTHER PRIOR ART *(Including Author, Title, Date, Pertinent Pages, Etc.)*

	AR		
	AS		

EXAMINER	DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.